

SECTION VI ENVIRONMENTAL EFFECTS OF THE PROPOSED POLICY

This section provides an analysis of potential adverse effects of SWRCB adoption of the proposed Policy. After evaluating the potential adverse effects of each of the issues in the proposed Policy, this analysis concludes that only one issue has the potential for significant adverse environmental effects: the proposed policy for compliance schedules. (See discussion of Issue 2.1 on page VI-17.)

Due to time constraints, the potential environmental effects of two proposed Policy issues were not evaluated in this FED. These issues are reporting levels and means of compliance for the proposed chronic toxicity requirements. These issues will be addressed in the October 1997 supplement to this FED, and the environmental checklist and analysis will be amended, as appropriate, to address any additional effects.

The proposed Policy consists of provisions to (1) establish, and determine compliance with, effluent limitations based on chemical-specific criteria set forth in the CTR and for chemical-specific basin plan objectives for priority pollutants that are not superseded by the CTR; (2) establish monitoring and source identification requirements for the TCDD equivalents; and (3) establish statewide narrative chronic toxicity provisions.

In addition, the proposed Policy addresses implementation of the above criteria and water quality objectives, relating to the following topics: storm water and urban runoff, nonpoint source discharges, site-specific objectives, watershed management and TMDLs, exceptions, and special studies.

This section analyzes potentially significant adverse environmental effects of SWRCB adoption of the proposed Policy. There are two baselines for this analysis.

A. BASELINES

The first baseline is the existing physical conditions, pre-CTR, under current RWQCB practices for regulating toxic substances. The baseline is what is now occurring in the absence of the proposed Policy and the CTR. This analysis identifies differences between existing RWQCB practices under current basin plan provisions and the proposed Policy, and the potential environmental effects of these differences. Also, this analysis examines whether adoption of the proposed Policy would change anything and, if so, does the change have the potential for significant adverse effects.

The second baseline is potential future conditions under the CTR criteria. This baseline is what would occur with implementation of the CTR in the absence of the proposed Policy. This analysis examines differences between RWQCB regulation of toxic pollutants, given the CTR and current basin plan provisions, and regulation under the proposed Policy. More detailed descriptions of each baseline follows.

Two baselines are required for this environmental document because CEQA requires the assessment of the potential effects of the proposed Policy on the existing physical environment as well as on potential future conditions under the CTR.

Baseline 1: Pre-CTR

At the present time, the SWRCB and RWQCBs have various options for the regulation of toxic pollutants in the absence of the CTR. The various bases for regulation of toxic pollutants, as well as implementation procedures, are briefly discussed below.

The RWQCBs and the SWRCB regulate the point source discharge of pollutants to surface waters through NPDES permits. Some permits contain numeric effluent limitations for toxics. RWQCBs have established numeric toxic effluent limitations in NPDES permits on several grounds.

First, in 1992, the U.S. EPA promulgated the National Toxics Rule (NTR). The NTR established criteria for the priority pollutants that were not included in the 1991 ISWP and EBEP. Those criteria remain in effect and are incorporated into some permits.

Second, some RWQCB basin plans include water quality objectives for some of the priority pollutants. (No basin plan includes objectives for all priority pollutants; see FED Section II Existing Regulatory Conditions.) Where this is the case, RWQCBs have included numeric effluent limitations based on these numeric objectives in some permits.

Third, all RWQCB basin plans contain a narrative toxicity objective to ensure "no toxics in toxic amounts". Some of the RWQCBs have included numeric effluent limitations in permits to implement this narrative toxicity objective. To derive these numeric limits, they may rely on numeric water quality protection values or guidance contained in U.S. EPA's TSD, NTR, Gold Book Criteria, U.S. EPA Region 9's "Guidance for NPDES Permit Issuance", drinking water maximum contaminant levels (MCLs), or Central Valley RWQCB's "Compilation of Water Quality Goals." In some cases, permits only require monitoring for toxic constituents, due to lack of data needed to prescribe specific effluent limitations.

Numeric permit limits are developed using existing implementation procedures (actions required to meet objectives). The implementation provisions vary from region to region. Some basin plans, for example, allow mixing zones and compliance schedules. Others do not address these subjects. The proposed Policy sets out statewide implementation procedures for all RWQCBs to follow, and this section of the FED addresses the potential environmental effects of this action.

The RWQCBs regulate the nonpoint source discharge of pollutants to surface waters primarily through application of the SWRCB's Nonpoint Source Management Plan (NPS Plan). The NPS Plan provides a policy for addressing all types of nonpoint source discharges, including those containing priority toxic pollutants. The State's policy gives the RWQCBs the

discretion to determine which of three option(s), individually or in combination, should be used to address a nonpoint source pollution problem. Those options are: (1) voluntary implementation by dischargers of best management practices (BMPs); (2) regulatory actions by RWQCBs to encourage dischargers to implement BMPs; and (3) RWQCB issuance of effluent limitations in WDRs.

Baseline 2: Post-CTR

When the CTR is adopted by the U.S. EPA, RWQCBs will implement the CTR criteria in place of relying on narrative toxicity objectives to establish effluent limitations for those priority pollutants for which there are no NTR criteria or basin plan objectives. Upon adoption of the CTR, RWQCBs will base permit limits on the federal criteria rather than developing numeric permit limits on a case-by-case basis based on narrative objectives. (The CTR will incorporate existing NTR criteria. RWQCBs will continue to implement existing basin plan water quality objectives for those priority toxic pollutants that are not superseded by the CTR.)

After adoption of the CTR, in the absence of the proposed Policy, the RWQCBs would use existing basin plan implementation policies and any implementation provisions in the CTR (e.g., compliance schedules), to establish numeric permit limits for priority pollutants. In addition, the RWQCBs would likely use available U.S. EPA guidance, such as the TSD (U.S. EPA 1991) or U.S. EPA Region IX Guidance on Permit Issuance. For nonpoint sources, the RWQCBs would continue to use the existing NPS Plan.

B. Determining Significance of Environmental Effects

When considering the significance of potential environmental effects in this FED, the CTR criteria, the RWQCB chemical-specific objectives for priority pollutants that are not superseded by the CTR, and the RWQCB toxicity objectives are generally considered the standards of significance for effects to water quality, to humans due to ingestion of water or organisms, and to aquatic life. Use of these Federal criteria and State objectives to determine potential significance of environmental effects generally is appropriate because they have been designed to represent the maximum amount of these pollutants that can remain in the water column without causing adverse effects on organisms using the aquatic system, on people consuming these organisms or water, and on other beneficial uses.

Section 15064(i) of the CEQA Guidelines states:

"If an air emission or water discharge meets the existing standards for a particular pollutant, the Lead Agency may presume that the emission or discharge of the pollutant will not be a significant effect on the environment. If other information is presented suggesting that the emission or discharge may cause a significant effect, the Lead Agency shall evaluate the effect and decide whether it may be significant."

The "Discussion" section of the CEQA Guidelines goes on to say:

"...CEQA would use air and water quality standards as at least presumptively valid standards of significance. In the absence of unusual problems, agencies would be able to use the analysis of the project's compliance with air and water pollution control laws in the place of a separate analysis under CEQA. This approach should help reduce the costs of the CEQA process."

For a few issues (e.g., mixing zones), there may be some exceedance of water quality criteria/objectives and additional factors are considered in the determination of significance of environmental effects. In these cases, the additional factors will be discussed in the analysis.

CHAPTER 1

POTENTIALLY SIGNIFICANT ADVERSE ENVIRONMENTAL EFFECTS

Because of the variability of the regulation of toxics among the RWQCBs, in this FED each issue in the proposed Policy was evaluated in terms of the two baselines described above. For Baseline 1, differences between the proposed Policy and existing RWQCB practices pre-CTR are explained, and the potential adverse environmental effects of the differences are discussed. For Baseline 2, potential environmental effects of the proposed Policy on potential future conditions under implementation of the CTR (as compared to future conditions under the CTR without the proposed Policy).

This analysis of each issue is formatted consistently as described below.

Baseline 1: Effects on existing environmental conditions

1. Existing RWQCB practices. This section provides a brief description of how RWQCBs currently address this issue.
2. Proposed Policy. This section provides a brief description of how the Policy addresses this issue and a brief description of why the Policy was developed this way.
3. Differences between proposed Policy and existing RWQCB practices. Differences between (1) and (2).
4. Potential adverse environmental effects. What are the potential effects of (3) on the existing physical environment?
5. Potentially significant adverse environmental effects. Are any anticipated adverse effects identified in (4) significant?

Baseline 2: Effects on potential future environmental conditions under CTR

In many cases, potential environment effects of the proposed Policy under Baseline 2 (with adoption of the CTR) are the same as they are under Baseline 1 (pre-CTR). Whether there may be additional effects under Baseline 2 and, if so, the nature of those potential effects are addressed for each issue.

ISSUE 1.1 SELECTION OF POLLUTANTS FOR CALCULATING EFFLUENT LIMITATIONS

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices for selection of pollutants for calculating effluent limitations. Currently, no statewide law, regulation, or policy specifies procedures for determining when effluent limitations are necessary to control discharged pollutants and prevent adverse effects to receiving waters. Permit writers at most RWQCBs presently use their best professional judgement¹ and guidance found in various technical documents when identifying the pollutants in a discharge requiring effluent limitations.

Only the basin plan of the San Francisco Bay RWQCB includes specific procedures for determining when effluent limitations should be established for substances in a discharge. The San Francisco Bay Basin Plan requires effluent limitations to be developed for all pollutants of concern unless dischargers certify that the pollutant is not present in the discharge and no change has occurred that may cause release of pollutants. This certification must be accompanied by monitoring results, and process and treatment descriptions, before issuance and reissuance of permits. The basin plan further states that dischargers must demonstrate to the satisfaction of the San Francisco Bay RWQCB that particular substances do not cause, or have the reasonable potential to cause, or contribute to an excursion² above numerical or narrative objectives (i.e., exhibit “reasonable potential”). The basin plan allows low volume discharges to be exempted from certification and monitoring if the discharges have been determined to have no significant adverse effect on water quality.

¹ Best professional judgement means the highest quality technical opinion developed by a permit writer after consideration of all reasonably available and pertinent data and information that forms the basis for the terms and conditions of an NPDES permit (U.S. EPA 1993). Best professional judgement, as used in this context, should be distinguished from the use of best professional judgement to develop technology-based effluent limitations in cases where an applicable effluent guideline has not been promulgated for an industry (see 40 CFR 125.3).

² An excursion is defined to occur only when the average concentration over the duration of the averaging period is above the criteria, whereas an exceedance is defined to occur whenever the instantaneous concentration in the receiving water is above the criteria, whereas (U.S. EPA 1991).

2. Proposed Policy for selection of pollutants for calculating effluent limitations. The proposed Policy states that if a RWQCB determines that a pollutant is or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable priority pollutant objective or criterion, the RWQCB shall establish a water quality-based effluent limitation in the permit for the discharge of that pollutant in accordance with the provisions of the proposed Policy. When facility-specific effluent monitoring data are available, the RWQCB shall make this determination by requiring effluent limitations for priority pollutants that are present in the discharger's undiluted effluent at levels above the background concentration or any applicable CTR criterion, whichever is less; if a background concentration cannot be determined due to lack of data, the RWQCB shall make this determination by requiring effluent limitations for priority pollutants present in the discharger's undiluted effluent at levels above half of the most stringent CTR criterion. Notwithstanding these provisions, the RWQCBs may include an effluent limitation for a CTR criterion in waste discharge requirements if the RWQCB finds that an effluent limitation is necessary to protect beneficial uses or to comply with antidegradation provisions, antibacksliding provisions, or other provisions of law. Where facility-specific effluent monitoring data are not available or are insufficient to determine "reasonable potential," it is recommended that the Guidance for NPDES Permit Issuance and the TSD be followed.

This approach was selected because it is protective of water quality, relatively easy for permit writers to implement, requires little data, and would probably lighten the monitoring and reporting burden for dischargers compared to present conditions.

3. Differences between proposed Policy and existing RWQCB practices. The proposed Policy sets out a consistent statewide method as compared to various methods now used by RWQCBs. Compared to the San Francisco Bay Basin Plan, the proposed Policy would result in less effluent limitations being required, thus relieving the monitoring and reporting burden for dischargers. However, the proposed Policy methodology requires effluent limitations in WDRs where a priority pollutant may be discharged at a level that will cause, or has the reasonable potential to cause or contribute to an excursion above an applicable priority pollutant objective or criterion. In addition, RWQCBs may include effluent limitations where necessary to protect beneficial uses or to comply with antidegradation provisions, antibacksliding provisions, or other provisions of law. The various methods now used by the RWQCBs differ in terms of data requirements and ease of calculation; they do not differ in terms of their effect on water quality and the environment.

4. Potential environmental effects of proposed Policy for selection of pollutants for calculating effluent limitations. The proposed Policy will have no significant effect on the environment. The proposed Policy will protect water quality in the non-ocean surface waters of California by ensuring that effluent limitations are included in permits where there is a reasonable potential for either criteria or objectives for priority pollutants to be exceeded. As explained in the introduction to this section of the FED, these criteria and objectives have

been established to protect human health and organisms using the aquatic system; therefore, there should be no adverse effects to human health or aquatic life.

The proposed Policy would result in fewer effluent limitations than under the San Francisco RWQCB policy and, possibly, under some current RWQCB practices. This should result in lower monitoring costs, in some cases, for the discharger. Because fewer toxic substances would be regulated, through effluent limitations and associated monitoring, there is a greater possibility that there could be an increase in the discharge of an unregulated pollutant, that would not be detected through routine monitoring. The proposed Policy protects against this potential adverse effect by stating:

"RWQCBs shall require periodic monitoring (at least once prior to the issuance and reissuance of a WDR) for pollutants for which criteria/objectives apply and for which no effluent limitations have been established; however, RWQCBs may choose to exempt low volume discharges determined to have no significant adverse effect on water quality."

In addition, WDRs, including NPDES permits, are subject to certain reporting requirements, which can be triggered by the new or increased discharge of toxic pollutants (see 40 CFR Sections 122.41(l) and 122.42(a) and (b); Water Code Section 13260(c); 23 California Code of Regulations Section 2210). Once reported, the RWQCBs can modify the permit, or WDRs, if appropriate, to regulate the discharge of these pollutants.

5. Potentially significant environmental effects. None.

B. Baseline 2: Effects on Potential Future Environmental Conditions under CTR

After adoption of the CTR, in the absence of the proposed Policy, the RWQCBs would continue to determine reasonable potential under existing practices, which are described above. Therefore, the environmental analysis for Baseline 2 is the same as for Baseline 1. Consequently, there will be no significant adverse effects when the proposed Policy is implemented in conjunction with the CTR.

ISSUE 1.2 CALCULATION OF EFFLUENT LIMITATIONS BASED ON NUMERIC CRITERIA

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices for calculating effluent limitations. Currently, no statewide policies exist for calculating water quality-based effluent limitations for the inland surface waters, enclosed bays, and estuaries of California. Most of the basin plans for the individual RWQCBs also do not provide detailed instructions on calculating water quality-based effluent limitations, but refer to various State and Federal guidance documents. The RWQCBs may

use a variety of methods for deriving effluent limitations, most of which have been listed in the proposed Policy as optional methods.

Only the San Francisco Bay RWQCB specifies a particular method for calculating effluent limitations. The San Francisco Bay basin plan requires that a steady-state mass balance equation be used to calculate water quality-based effluent limitations when ambient concentrations are equal to or less than the water quality criteria. The mass-balance equation considers dilution credit, the water quality objective, and the ambient background concentration of each substance.

2. Proposed Policy for calculating effluent limitations. The proposed Policy states that when a RWQCB determines, using procedures described in the proposed Policy, that water quality-based effluent limitations are necessary to control a pollutant in a discharge, the permit shall contain effluent limitations developed using any of the following methods:

- a. RWQCBs may assign a portion of the loading capacity of the receiving water to each source of waste, point and nonpoint based on a TMDL;
- b. RWQCBs may use a steady-state mass balance model in connection with a statistical, stepwise procedure that is described in the proposed Policy;
- c. RWQCBs may elect to apply a dynamic model, approved by the RWQCB, where sufficient effluent and receiving water data exist;
- d. RWQCBs may use discharge prohibitions to implement water quality criteria for a particular area; or
- e. RWQCBs may establish effluent limitations that considers intake water pollutants according to the proposed Policy.
- f. In addition, the RWQCBs shall impose more restrictive limitations where necessary for the protection of beneficial uses.

3. Differences between proposed Policy and existing RWQCB practices. The proposed Policy sets out consistent statewide methods as compared to various methods now used by the RWQCBs. Compared to the steady-state equation included in the San Francisco Bay Basin Plan (and probably used by several RWQCBs), method (b) of the proposed Policy is a more accurate method for deriving effluent limitations (in some cases resulting in more stringent effluent limitations; in some cases resulting in less stringent effluent limitations.)

4. Potential environmental effects of proposed Policy for calculating effluent limitations. The proposed Policy will not have significant effects on the environment. The proposed Policy will probably result in more accurate effluent limitations. (See Section V, Chapter 1.2 for evaluation of various methods for calculating effluent limitations.) In some cases, more accurate effluent limitations could result in more stringent effluent limitations which would be slightly more protective of water quality. In other cases, more accurate effluent limitations could result in slightly less stringent effluent limitations that are still protective of water quality.

In any event, the proposed Policy sets forth methods to accurately calculate effluent limitations that implement the applicable toxics criteria or objectives. Therefore, the proposed Policy will protect non-ocean surface water quality for designated beneficial uses which include human health and other aquatic life.

In addition, the methods allowed under the proposed Policy do not differ substantially from those currently used by the RWQCBs to calculate effluent limitations. Therefore, the effect on the dischargers of specifying the allowable methods should be minimal.

5. Potentially significant environmental effects. None.

B. Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

After adoption of the CTR, in the absence of the proposed Policy, the RWQCB would use existing practices to calculate effluent limitations. Adoption of the CTR would necessitate one additional step for the RWQCBs when they develop effluent limitations for metals because the CTR metals criteria will likely be in the dissolved form. They will have to be translated into the total recoverable form before effluent limitations can be determined. The potential effects of this are described below under Issue 1.2.1 (Translators for Metals and Selenium). Potential environmental impacts under Baseline 2 do not differ from impacts under Baseline 1.

ISSUE 1.2.1 TRANSLATORS FOR METALS AND SELENIUM

A. Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices for metals translators. There are currently no basin plan policies for metals translators. The metals objectives in the San Francisco Bay Basin Plan currently are expressed as total recoverable; therefore, a translator is not needed. The Central Valley Basin Plan expresses the metals objectives as dissolved and the selenium objectives as total recoverable; translators for dissolved objectives are not addressed in the basin plan and the dissolved metals objectives have not yet been put into permits. The Santa Ana Basin Plan includes site-specific objectives for three metals (that apply to segments of the Santa Ana River) which are expressed as dissolved. Although not contained in their basin plan, the Santa Ana RWQCB uses translators that were developed during the site-specific objectives study for these metals (i.e., 0.26 for cadmium and copper, and 0.61 for lead).

2. Proposed Policy for metals translators. Under the proposed Policy, RWQCBs that have metals objectives expressed as dissolved would use the dissolved objectives directly to calculate a total recoverable effluent limitation unless a defensible translator study is planned and completed.

3. Differences between proposed Policy and existing RWQCB practices. The proposed Policy provides a discharger with two choices: (a) Use of a translator equal to 1; or (b) development of a defensible translator. A defensible translator is defined as one developed using U.S. EPA recommended or other defensible procedures. While there are no established RWQCB translator policies, the proposed Policy methods are the ones RWQCBs would most likely use to implement metals objectives in the dissolved form.
4. Potential environmental effects of proposed Policy for metals translators. The proposed translator Policy is not expected to result in adverse impacts to the environment. Without promulgation of the CTR criteria, this Policy would apply only to existing basin plan metals objectives that are expressed in dissolved form. Only the Central Valley and Santa Ana RWQCBs have such objectives. Both the 1:1 translator and the site-specific translator study result in the development of effluent limitations necessary to meet dissolved metals objectives. Therefore, the use of the proposed Policy for translators would not cause adverse impacts to water quality, human health, or other organisms.
- In some cases, use of a 1:1 translator could result in effluent limitations more stringent than necessary to meet the applicable objectives. In such cases, the discharger has the option of entering into a site-specific translator study. A site-specific study analyzes the mixture of effluent and receiving water to determine the dissolved and total recoverable metal fractions. The ratio of these fractions is then used to translate from the dissolved concentration in the downstream receiving water to the total recoverable concentration in the effluent that will not exceed the criterion. This approach will likely give the most accurate estimate of actual in-stream partitioning relationships and will result in the least costly means for dischargers to meet dissolved metals objectives.
5. Potentially significant environmental effects. None.

Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

The CTR will establish criteria for some metals. This U.S. EPA action could result in a greater number of permit effluent limitations for metals and significant reductions in metals loading to the waters of the State. (See the economic analysis in Section VIII.) With the exception of the freshwater chronic criteria for selenium, the CTR criteria for metals and selenium are being expressed as the dissolved fraction. In the absence of the proposed Policy, RWQCBs would likely follow U.S. EPA guidance in implementing the CTR dissolved metals criteria. The potential for environmental effects, therefore, is the same as Baseline 1.

ISSUE 1.2.2 MIXING ZONES AND DILUTION CREDITS

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices for mixing zones and dilution credits. There is currently no statewide policy on mixing zones for non-ocean surface waters in California. (The U.S. EPA allows for mixing zones in the water quality standards regulations (40 CFR 131.11).) Four of the nine RWQCB basin plans have varying provisions for mixing zones, while the basin plans for the remaining five do not mention them. Of the four RWQCB basin plans addressing mixing zones, three (Central Valley, Los Angeles, and San Diego) contain provisions to allow them on a case-by-case basis. The San Francisco Bay Basin Plan specifies a dilution ratio of 10:1 for deep water outfalls and zero for shallow water outfalls. Exceptions are allowed based on site-specific factors in determining mixing zones. The remaining five RWQCBs (North Coast, Central Coast, Lahontan, Colorado River, and Santa Ana) cannot grant mixing zones to dischargers.
2. Proposed Policy for mixing zones and dilution credits. The proposed Policy authorizes RWQCBs to grant mixing zones and dilution credits for point source discharges under the provisions of the proposed Policy. The proposed Policy specifies the parameters for determining how much (if any) receiving water is available for dilution, the dilution ratio, and dilution credit. Dilution credits and mixing zones are prohibited for incompletely-mixed discharges unless the discharger completes a mixing zone analysis and demonstrates to the satisfaction of the RWQCB that a dilution credit is appropriate. The Policy specifies mixing zones requirements to ensure protection of water quality and the environment.
3. Differences between proposed Policy and existing RWQCB practices. With the proposed Policy, all RWQCBs, including those that currently do not have mixing zone provisions in their basin plans, would have the option of considering whether to grant or deny a mixing zone for priority pollutants and chronic toxicity on a case-by-case basis. The proposed Policy supersedes the San Francisco Bay Basin Plan provisions that specify a dilution ratio of 10:1 for deep water outfalls and zero for shallow water outfalls. However, the San Francisco Bay RWQCB may grant these dilution ratios, case-by-case, if they are consistent with the provisions of the proposed Policy.
4. Potential environmental effects of proposed Policy for mixing zones. Since, by definition, mixing zones are areas where water quality criteria can be exceeded, there is the potential for adverse environmental effects. The proposed Policy could result in increased concentrations of pollutants within a RWQCB-designated mixing zone, particularly for those RWQCBs that do not have any provisions currently. Mixing zones increase the mass loadings of the pollutant(s) to the water body and can adversely effect benthic communities within the area of the mixing zone. However, a mixing zone is defined as limited volume of receiving water allocated for mixing that will not cause adverse effects to the overall water body. The proposed Policy provides protections against any significant adverse environmental effects.

5. Potentially significant environmental effects. Under the proposed Policy, mixing zone effects are considered by the RWQCB on a case-by-case basis after determining the capacity of the receiving water to accommodate the discharge. This assessment must take into consideration the following protections which are set forth in the proposed Policy.

"A mixing zone shall not:

- (1) compromise the integrity of the entire water body;
- (2) cause acutely toxic conditions to aquatic life;
- (3) restrict the passage of aquatic life;
- (4) effect biologically sensitive, critical, or unique habitats;
- (5) produce undesirable or nuisance aquatic life;
- (6) result in floating debris, oil, scum;
- (7) produce objectionable color, odor, taste, or turbidity;
- (8) cause objectionable bottom deposits;
- (9) cause nuisance; or
- (10) be allowed at or near any drinking water intake. A mixing zone is not a source of drinking water. To the extent of any conflict between this determination and the Sources of Drinking Water Policy (SWRCB Resolution 88-63), this determination supersedes the provisions of that policy.

The RWQCB shall deny a mixing zone if necessary to protect beneficial uses, meet the conditions of this Policy, or comply with other regulatory requirements.

The RWQCB shall consider denying or significantly limiting a mixing zone and dilution credit if the discharge contains pollutants that are carcinogenic, mutagenic, teratogenic, persistent, bioaccumulative, or attractive to aquatic organisms. The RWQCB shall also consider denying or significantly limiting a mixing zone or dilution credit for discharges to lakes, reservoirs, enclosed bays, estuaries, or other water body types where pollutants are not readily flushed through the system. In the case of multiple mixing zones, proximity to other outfalls shall be carefully considered."

For most of the issues addressed in this FED, we have taken the general approach of using the priority pollutant criteria/objectives as presumptively valid standards of significance for environmental effects. While the mixing zone policy provision allows water quality criteria/objectives to be exceeded for a limited volume of receiving water, it requires a site-specific evaluation of potential effects and clearly prohibits RWQCB designation of a mixing zone if it would have adverse effects on the integrity of the water body or to beneficial uses. Probably the greatest potential for adverse effects would be those that could occur to benthic organisms. Under the proposed Policy, mixing zones that would have significant adverse effects to these organisms are clearly prohibited in the section of the Policy which prohibits mixing zones that could cause objectionable bottom deposits. "Objectionable bottom deposits" are defined in the Policy as follows:

"...an accumulation of materials or substances on or near the bottom of a water body which create conditions that adversely effect aquatic life, human health, beneficial uses, or aesthetics. These conditions include, but are not limited to, the accumulation of pollutants in the sediments and other conditions which result in harm to benthic organisms, production of food chain organisms, or fish egg development. The presence of such deposits shall be determined by RWQCB(s) on a case-by-case basis."

Pollutant loading due to RWQCB designation of a mixing zone cannot result in significant adverse effects to a water body because the proposed Policy provides that water quality criteria/objectives must be met outside the limits of the mixing zone, the integrity of the water body as a whole cannot be compromised, and RWQCBs must deny mixing zones if necessary to comply with other regulatory requirements (e.g., TMDLs).

Based on the proposed Policy's requirement for site-specific consideration of a water body's ability to assimilate the discharge and on the proposed Policy's protections against adverse environmental effects, no significant adverse effects are anticipated due to the proposed Policy for mixing zones. Also, allowing that mixing zones may be considered by the RWQCBs statewide, provided that specified conditions are met, could ease the dischargers' compliance burden.

Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

The potential for environmental effects of the proposed Policy for mixing zones and dilution credits when implemented in conjunction with the CTR is virtually the same as it would be under Baseline 1. Addition of the mixing zone policy should ease the regulatory burden on certain dischargers of complying with effluent limitations necessary to implement the CTR criteria.

1.2.3 AMBIENT BACKGROUND CONCENTRATIONS

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices for calculating ambient background concentrations. Currently, there is no statewide law or policy applicable to inland surface waters, enclosed bays, or estuaries that defines ambient background concentration or specifies how it should be determined. The definition and determination of ambient background concentrations for these waters are currently deferred to the RWQCBs. The San Francisco Bay RWQCB has estimated saltwater and freshwater background concentrations for seven metals. These background concentrations, listed in the basin plan, were calculated as averages of observed concentrations. The remaining eight RWQCBs do not specify in their basin plans how background concentrations are to be estimated and, thus, various methods are used.

2. Proposed policy for calculating ambient background concentrations. The ambient background concentration is calculated as the upper 99 percent confidence level of the 99th percentile of observed ambient water concentrations with consideration of the exceedance frequencies and averaging periods of the criteria. This alternative was selected because it reflects critical conditions, accounts for data variability and sample size, considers the exceedance frequencies and averaging periods of the criteria, and results in more accurate effluent limitations.

3. Differences between proposed Policy and existing RWQCB practices. Currently, the RWQCBs use various methods to calculate ambient background concentrations. The proposed Policy sets forth a reliable method (see discussion of alternative method in Section V, Chapter 1.2.3) that also provides statewide consistency.

4. Potential environmental effects of proposed Policy for calculating ambient background concentrations. The ambient background concentration of a pollutant is a factor in the mass balance equation used to calculate water quality-based effluent limitations (See Section V, Chapter 1.2). The proposed Policy would result in accurate calculation of background and, therefore, result in accurate effluent limitations. In some cases, more accurate effluent limitations may result in more stringent effluent limitations which would be more protective of water quality. In other cases, more accurate effluent limitations may result in less stringent effluent limitations that would, nevertheless, be protective of water quality.

Use of a reliable method to calculate background ensures protection of water quality and, therefore, serves to protect non-ocean surface water quality for identified beneficial uses such as human health and aquatic life. Selection of a consistent method for calculating background should have no effect on dischargers.

5. Potentially significant adverse environmental effects. None.

Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

The potential for environmental effects of the proposed Policy for calculating effluent limitations is virtually the same as it would be under Baseline 1.

ISSUE 1.2.4 INTAKE WATER CREDITS

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices regarding intake water credits. Currently, no statewide law or policy exists that directly addresses credit for intake water pollutants when establishing water quality-based effluent limitations for discharges to inland surface waters, enclosed bays, or estuaries. The basin plans also do not contain any special provisions for intake water pollutants, but permit writers may take the presence of intake water pollutants into account, as

appropriate, in individual permitting decisions as long as permit limits are adequate to meet the water quality objectives when considered along with control requirements for other discharges to the stream.

2. Proposed Policy for intake water credits. If a pollutant in the receiving water has exceeded an applicable criterion and no TMDL has been completed, the discharge may contain that pollutant at levels no greater than the concentration of the receiving water, if no net addition of the pollutant occurs and other conditions are also met. This alternative was selected because the U.S. EPA had found in the Great Lakes Initiative that this approach could be implemented without causing adverse effects on the environment, yet providing regulatory relief to certain dischargers.

3. Differences between proposed Policy and existing RWQCB practices. The proposed Policy sets out a consistent statewide method for allowing intake water credits. The proposed Policy allows consideration of intake water credit on a pollutant-by-pollutant and outfall-by-outfall basis for all types of dischargers if certain conditions are met that protect the water quality of the receiving water.

4. Potential environmental effects of proposed Policy for intake water credits. For those cases where a RWQCB determines that an intake water credit is appropriate, effluent limitations may be less stringent than current limitations. However, given the restrictions of the proposed Policy, the water quality of the receiving water should be maintained, with the mass and the concentration of the intake water pollutant neither increasing nor decreasing.

5. Potentially significant environmental effects. No significant adverse effects to water quality, human health, or aquatic life are anticipated from the proposed Policy because intake water credit may only be considered if certain conditions are met to protect against such effects. Intake water credits are considered only on a pollutant-by-pollutant and outfall-by-outfall basis and the discharger must demonstrate that the following conditions are met:

- . The ambient background concentration (see Section V, Chapter 1.2.3) and the intake water concentration of the pollutant of concern exceed the most stringent applicable criterion for that pollutant;
- . No TMDL or watershed management plan applicable to the discharge has been approved;
- . The intake water is from the same water body as the receiving water body; i.e., the intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been diverted by the discharger. This may be demonstrated by the following conditions: (1) the ambient background concentration and the intake water concentration of the pollutant of concern are similar; (2) there is a direct hydrological connection between the intake and discharge points; and (3) water quality characteristics are similar in the intake and receiving waters. The RWQCB may also consider other factors when determining whether the intake water is from the same water body as the receiving water body;
- . The facility does not alter the intake water pollutant chemically or physically in a manner

that causes water quality and beneficial uses to be adversely affected; and

- . The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses to occur that would not occur if the intake water pollutant had been left in-stream.

Furthermore, the facility may only discharge a mass and concentration of the intake water pollutant that are no greater than the mass and concentration found in the facility's intake water. No permit may provide special consideration of intake water pollutants after the maximum allowed applicable compliance schedules for the criteria or objective. Also, the proposed Policy may provide some regulatory relief to dischargers faced with this situation.

Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

The proposed Policy would be implemented in the same manner as described in Baseline 1 (pre-CTR), so no significant adverse effects are anticipated.

ISSUE 2.1 COMPLIANCE SCHEDULES

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices regarding compliance schedules. A compliance schedule refers to a designated timetable of interim and final dates in a permit for implementing required actions to comply with water quality standards and effluent limitations based on the standards. State regulations authorize the SWRCB and RWQCBs to include time schedules in WDRs for discharges not required to be regulated under an NPDES permit. There is no current statewide policy allowing compliance schedules in NPDES permits for discharges to inland surface waters, oceans, enclosed bays, or estuaries. However, the San Francisco Bay and Central Valley basin plans contain compliance schedule provisions applicable to NPDES permittees that allow up to 10 years for compliance. The other seven RWQCBs have not yet included specific provisions for compliance schedules in their respective basin plans.
2. Proposed Policy for compliance schedules. The proposed Policy allows the establishment of a compliance schedule of up to ten years in the WDRs of existing dischargers where immediate compliance with a CTR criterion is infeasible.
3. Differences between proposed Policy and RWQCB practices regarding compliance schedules. The proposed Policy allows compliance schedules in WDRs for CTR criteria only. The proposed Policy does not apply to basin plan objectives for priority pollutants that are not superseded by the CTR. The proposed Policy will apply statewide, including in those regions that do not currently address compliance schedules.

4. Potential environmental effects of proposed Policy for compliance schedules. The proposed Policy will have no effects on existing environmental conditions prior to adoption of the CTR because this section of the proposed Policy applies only to CTR criteria.
5. Potentially significant environmental effects. None.

Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

In no event does the proposed Policy allow a schedule for compliance with the CTR criteria to exceed 10 years from Policy adoption. In the absence of the Policy, two RWQCBs (Central Valley and San Francisco) would allow up to 10 years for compliance. The CTR would allow up to five years from the date an NPDES permit is first issued, reissued or modified to include CTR-based effluent limitations, whichever is sooner, with a maximum compliance deadline of 10 years from the effective date of the CTR. The proposed Policy and the CTR in some cases, therefore, will not differ substantially in practical effect. In a worst case scenario, a discharger would be allowed five more years to come into compliance. There could be adverse effects during that period because the criteria established to protect human health and aquatic life would not be met.

The proposed Policy contains provisions to protect against adverse effects. It is written narrowly to apply only to those situations where it is infeasible to achieve immediate compliance with the CTR criteria, and it does not apply to new discharges. The schedule of compliance must include a time schedule for completing actions that demonstrate progress toward attainment of the criteria and the final compliance date is to be based on the shortest practicable time necessary to achieve compliance.

Prior to authorization of a compliance schedule in a permit, a discharger must document that the proposed schedule is as short as possible and that source control measures have been implemented or are scheduled. There must be a final compliance date which is based on the shortest practicable time needed to achieve compliance.

The Central Valley RWQCB and the San Francisco RWQCB consider 10 years to be sufficient time to accommodate a variety of compliance challenges ranging from source control identification and implementation to extensive treatment options. Under the proposed Policy, dischargers will be able to work with RWQCBs to develop efficient and effective methods of compliance that may minimize secondary environmental effects that could be caused by the means of compliance. The proposed Policy requirements to achieve compliance in the shortest time practicable, plus the interim requirements of the Policy would ensure that progress is made toward meeting the CTR criteria. In addition, compliance schedule provisions assist dischargers in achieving the criteria.

ISSUE 2.2 INTERIM REQUIREMENTS

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices regarding interim requirements. Presently, no statewide policy specifies the situations under which interim effluent limitations may be considered for discharges to inland surface waters, enclosed bays, estuaries, or ocean waters. State regulations for NPDES permits and other WDRs address interim requirements, other than interim effluent limitations, under certain circumstances. Interim requirements, including effluent limitations and other requirements, may be allowed where a schedule of compliance has been authorized. In the absence of such an authorization, water-quality based limitations must be met at the date of permit issuance. Interim effluent limitations are conditionally provided for in the San Francisco Bay and the Central Valley basin plans.

2. Proposed Policy regarding interim requirements. If it cannot be determined, due to lack of data, whether an effluent limitation is necessary for a pollutant, the RWQCB may require the discharger to collect the necessary data. The RWQCB shall set a compliance schedule for data collection that is as short as practicable, and shall determine, based on the collected data, whether effluent limitations are necessary to control the pollutant.

If an effluent limitation cannot be calculated due to lack of data (e.g., an SSO is under development), an interim limitation may be established in the WDR that is at least as stringent as the previous effluent limitation. The discharger may, furthermore, be required to participate in activities necessary to develop final limitations and other measures, such as source control, may also be imposed. When interim requirements are completed, the RWQCB will reopen the WDR for that pollutant, and calculate and include in the WDR final water quality-based effluent limitations based on collected information.

If a discharger cannot immediately meet water quality-based effluent limitations, and the RWQCB determines that a compliance schedule is appropriate, an interim limitation must be established in the WDR that is at least as stringent as the previous effluent limitation. The discharger may, furthermore, be required to implement requirements to control the pollutant, such as source control measures. Water quality criteria/objectives must in all cases be met within the applicable compliance schedule (up to ten years from the date of adoption of this Policy for the CTR criteria).

3. Differences between proposed Policy and RWQCB practices. SWRCB regulations address interim requirements in compliance schedules for NPDES permits and WDRs, under certain circumstances. The proposed Policy would provide additional, more detailed guidance on interim requirements.

4. Potential environmental effects of proposed Policy regarding interim requirements. It is not anticipated that the proposed Policy will have any adverse effects on the environment. The proposed Policy recognizes that, in some cases, there may be inadequate data to

determine whether an effluent limitation is needed or to calculate an effluent limitation, or the discharger may not be able to immediately meet an effluent limitation. In such cases, the proposed Policy establishes requirements for interim actions to ensure that progress is made in a timely manner toward meeting applicable criteria/objectives.

5. Potentially significant environmental effects. None.

Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

The potential for environmental effects is virtually the same upon implementation of the CTR as it would be under Baseline 1 (pre-CTR).

ISSUE 2.3 MONITORING AND REPORTING REQUIREMENTS

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices for monitoring and reporting. Federal and State regulations specify monitoring requirements for NPDES permits and non-NPDES WDRs, respectively (see Section V, Chapter 2.2). The information generated by these monitoring and reporting requirements is used to determine compliance with effluent limitations established to protect water quality.
2. Proposed Policy for monitoring and reporting. The proposed Policy language would provide general monitoring and reporting requirements which are consistent with Federal and State regulations.
3. Differences between proposed Policy and RWQCB practices. The proposed Policy does not represent a substantive change from existing practices but is designed to provide greater statewide consistency.
4. Potential environmental effects of proposed Policy for monitoring and reporting. The proposed Policy, as well as the various existing RWQCB practices, protects water quality by providing additional guidance to the RWQCBs on monitoring compliance with effluent limitations that have been established to meet applicable criteria and objectives. The proposed Policy does not represent a significant change from existing practices, and, therefore, would not have significant effects on water quality, human health, or aquatic life, or place significant additional requirements on dischargers.
5. Potentially significant environmental effects. None.

Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

Adoption of the CTR will not affect how RWQCBs conduct their monitoring and reporting programs. Therefore, there will be no significant environmental effect when this proposed Policy for monitoring and reporting is implemented in conjunction with the CTR.

ISSUE 2.4 REPORTING LEVELS

This issue will be addressed in a Supplement to the FED (to be released in October 1997).

ISSUE 3 2,3,7,8-TCDD EQUIVALENTS

1. Existing RWQCB practices regarding 2,3,7,8-TCDD equivalents. While RWQCBs have not adopted objectives for congeners of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) equivalents for non-ocean surface waters, the San Francisco Bay RWQCBs has included TCDD equivalents in some WDRs, and it is monitoring it in other discharges. The Ocean Plan contains a water quality objective of 0.0039 picograms per liter (pg/l) for TCDD equivalents.
2. Proposed Policy regarding 2,3,7,8-TCDD equivalents. RWQCBs will require all NPDES dischargers to conduct effluent and ambient monitoring for the following congeners of 2,3,7,8-tetrachlorodibenzo-p-dioxin:

2,3,7,8-pentaCDD
2,3,7,8-hexaCDDs
2,3,7,8-heptaCDD
octaCDD
2,3,7,8-tetraCDF
1,2,3,7,8-pentaCDF
2,3,4,7,8-pentaCDF
2,3,7,8-hexaCDFs
2,3,7,8-heptaCDFs
octaCDF

This requirement will be implemented through a RWQCB order amending all NPDES permits in their respective regions within three months of the effective date of this proposed Policy. The purpose of the monitoring is to assess the presence and amounts of the congeners being discharged to inland surface waters, enclosed bays, and estuaries in the State; and to identify sources of the congeners and potential means of control. In order to do this, RWQCBs will specify in the NPDES permits the locations and frequencies of the monitoring that is necessary to make these assessments.

3. Differences between proposed Policy and RWQCB practices. Except for the existing monitoring requirements for some San Francisco Bay RWQCB facilities, the proposed Policy would institute monitoring requirements for these congeners.
4. Potential environmental effects of proposed Policy regarding 2,3,7,8-TCDD equivalents. Dioxins and furans containing chlorine at the 2,3,7, and 8 positions are some of the most toxic substances in existence. In addition, they are environmentally persistent, they bioaccumulate, and some are probable carcinogens. (See discussion of these substances in Section V, Chapter 3.) There are no adverse environmental effects due to monitoring and identifying discharges and sources of the 2,3,7,8-TCDD equivalents; and this information is being gathered and provided to the SWRCB for consideration of establishing water quality objectives for 2,3,7,8-TCDD and other congeners in Phase 2 of ISWP/EBEP development.
5. Potentially significant environmental effects. None.

Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

The CTR is not setting any objectives or procedures for these 2,3,7,8-TCDD equivalents, therefore, potential environmental effects are the same as Baseline 1.

ISSUE 4 TOXICITY CONTROL PROVISIONS

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices regarding chronic toxicity. All of the basin plans contain a narrative toxicity objective. The San Francisco Bay and San Diego basin plans call for toxicity identification evaluations (TIEs) and toxicity reduction evaluations (TREs) in the event that toxicity is identified. A great majority of existing permits contain monitoring requirements or effluent limits for chronic toxicity, and that generally the permits also include standardized TRE/TIE language. In addition, the permits for 17 of the 20 sample facilities used in U.S. EPA's economic analysis for the CTR were examined to determine what toxicity requirements were included.³ The results of this examination are summarized in Table VI-1.

³ The full names and locations of these facilities can be found in Section VIII. Three of the 20 sample facilities used in the economic analysis were eliminated from the evaluation because they are no longer in operation

Table VI-1. Toxicity Requirements Assessment of Sixteen Sample Facilities with NPDES Permits

FACILITY	Chronic Toxicity Limit*	TIE/TRE Required	Comment
Alta-Gold	No	No	No reasonable potential for toxicity.
Arcata	Yes	Yes	
Coachella	Acute limits	Yes	Monitoring for chronic toxicity required in permit to evaluate need for chronic toxicity limit.
Collins Pine Co.	Acute testing only		Reasonable potential for toxicity not demonstrated. Chronic testing showed 100% survival. Permit states that chronic and acute limits, and monitoring, will be placed in permit based on State policy for water quality toxicity control 6 months after adoption of the state policy (this policy was never adopted).
Colton	Yes	Yes	
E.I. Dupont	Acute limits		Monitoring for chronic toxicity required in permit. No reasonable potential for toxicity demonstrated as no toxicity found in studies conducted before permit was adopted.
Exxon Corp.	Yes	Yes	

FACILITY	Chronic Toxicity Limit*	TIE/TRE Required	Comment
Hunter's Point	Acute limits	Yes, in Basin Plan	Studies of PG&E effluent has not indicated a need for chronic toxicity limitations. Monitoring programs require that all violations of permit limits be reported to the RWQCB, and the TRE provisions are included in the region's basin plan and would be enforced if necessary.
Merced	Yes	Yes	Permit does not specifically mention TREs, but requires workplan to investigate toxicity and steps to be taken to reduce or eliminate toxicity.
Riverside	Acute limits	Yes	Monitoring for chronic toxicity required. Accelerated monitoring if over 1.0 TU _c .
Rockwell	Yes	Yes	
Sacramento	Acute limits	Yes	Monitoring for chronic toxicity required. TIE required in monitoring proposal. Previous monitoring showed no toxicity
San Jose	Yes	Yes, in process	Blanket Chronic Toxicity Order #92-104 included as part of permit.
San Juan	Yes	Yes	
Sunnyvale	Yes	Yes, in process	Blanket Chronic Toxicity Order #92-104 included as part of permit.
Tillman	Yes	Yes	
Unocal	Acute limit	Yes	Reasonable Potential for chronic toxicity not demonstrated.

* Unless otherwise noted if a limit is included in the permit, then a monitoring requirement is included in the permit.

2. Proposed Policy for chronic toxicity. The proposed Policy has a statewide narrative chronic toxicity objective. The proposed Policy specifies a list of toxicity tests (from the Ocean Plan and U.S. EPA 40 CFR 131 tests), but allows the development of new tests. Once toxicity is confirmed, TIEs and TREs are required.

3. Differences between proposed Policy and RWQCB practices. The proposed Policy is very similar to existing RWQCB practices and to current U.S. EPA guidance for POTWs and industrial discharges. However, we do not know that these requirements are included in all permits and the proposed Policy could be a change from current practices for some dischargers.

4. Potential environmental effects of proposed Policy for chronic toxicity. The chronic toxicity requirements will serve to ensure protection of water quality and aquatic life throughout the State. Because these State requirements are very similar to existing RWQCB practices for POTWs and industrial dischargers, widespread effects to these dischargers are not anticipated. However, some POTW/industrial discharge permits may not contain chronic limits, testing, and TRE's. In such cases, the proposed Policy could impose additional monitoring requirements, TIE/TREs, and, potentially, additional compliance actions by dischargers. Therefore, the SWRCB is examining costs of performing TIEs and TREs, as well as costs and methods of compliance actions that may be necessary to reduce toxicity. Compliance costs will be examined in the form of case studies, and will be presented in the Supplement to the FED (to be released in October 1997). Once the means of compliance have been outlined in the case studies, the SWRCB will also evaluate the potential environmental effects of such compliance actions. This environmental analysis will also be presented in the October 1997 Supplement to the FED.

5. Potentially significant environmental effects. The toxicity requirements will not adversely affect water quality or aquatic life. Potential environmental effects of means of compliance will be addressed in the supplement to the FED for those permits that do not currently implement chronic toxicity requirements.

Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

The CTR is not proposing a toxicity objective or any implementation language for toxicity objectives and, therefore, potential environmental effects of Baseline 2 will be the same as Baseline 1.

ISSUE 5.1 STORM WATER AND URBAN RUNOFF

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices regarding storm water. RWQCBs have adopted NPDES storm water permits for municipal separate storm sewer systems (MS4's) serving a population of 100,000 or more and for industrial facilities not suited for coverage under a General Industrial

Permit. The MS4 permits require the discharger to reduce the discharge of pollutants to the maximum extent practicable (MEP). Efforts of municipalities subject to MS4 permits have been focused on implementation of BMPs to reduce pollutants, rather than on treatment of storm water to remove pollutants. BMPs emphasize activities such as pollution prevention and public education regarding topics such as the use and disposal of household chemicals, oil, and other wastes.

In addition, there are two statewide NPDES general storm water permits, the General Industrial Permit and the General Construction Permit. These permits require implementation of best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT). Both the General Industrial and Construction Permits require the development of a Storm Water Pollution Prevention Plan (SWPPP) and a monitoring plan. The SWPPP must include BMPs which can range from good housekeeping to structural controls.

2. Proposed Policy for storm water. The proposed Policy is making no changes in the existing storm water program at the SWRCB and RWQCBs.

3. Differences between proposed Policy and RWQCB practices. There is no difference between the proposed Policy and RWQCB practices, because no new policy is proposed is proposed.

4. Potential environmental effects of proposed Policy for storm water. There is no change in SWRCB/RWQCB policy, so there are no environmental effects attributable to the proposed Policy.

5. Potentially significant environmental effects. None.

Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

The proposed Policy does not change the SWRCB and RWQCB approach to addressing storm water and urban runoff by pollution prevention and reduction: This approach will continue after U.S. EPA promulgates the CTR criteria; therefore, it is the same as Baseline 1.

ISSUE 5.2 NONPOINT SOURCE DISCHARGES

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices regarding nonpoint sources. Nonpoint source control programs are used by the RWQCBs to protect beneficial uses, prevent nuisance conditions, and to implement water quality standards in waters of the State affected by nonpoint source pollution. RWQCB nonpoint source control programs are built upon and furthered by the

SWRCB nonpoint source program. Currently, the SWRCB nonpoint source program consists of:

- Nonpoint Source Management Plan (NPS Plan) (adopted by the SWRCB in November 1988);
- Initiatives in Nonpoint Source Management (adopted by the SWRCB and submitted to U.S. EPA in September 1995) to implement the Coastal Zone Act Reauthorization Amendments; and
- Watershed Management Initiative.

The NPS Plan provides a general procedural approach to addressing all types of nonpoint source discharges. Three management approaches are presented to address nonpoint source pollution problems. The RWQCBs have the discretion to decide which or what mix of the three options are appropriate to address any given nonpoint source pollution problem. Those management approaches are:

Voluntary implementation by dischargers of best management practices (BMPs);

- Regulatory actions by RWQCBs to encourage dischargers to implement BMPs; and
- WQCB adoption of effluent limitations in waste discharge requirements (WDRs).

The NPS Plan directs the RWQCBs to use the least stringent option that will protect or restore water quality, with more stringent measures considered if timely improvements are not achieved. The SWRCB encourages voluntary, collaborative processes at the local level. Nonpoint source discharges can be intermittent, highly variable, dependent on local land use practices, and site specific. Often, these discharges cannot be effectively controlled by conventional treatment systems. Therefore, a single set of practices is often not suitable for the myriad of geographic, climatological, hydrological, and land-use related factors affecting nonpoint source pollution throughout the State. Typically, specific practices must be tailored to site-specific conditions, and a watershed management approach could be appropriate. The watershed management approach is designed to consider issues specific to a geographic area and to include diverse issues as defined by the watershed's stakeholders to ensure comprehensive solutions.

2. Proposed Policy for nonpoint source discharges. No new policy is proposed. The existing nonpoint source program would remain in effect, and the RWQCBs would continue to use it to develop nonpoint source control implementation measures. The SWRCB would continue support for the watershed management approach and the NPS Plan.

3. Differences between proposed Policy and RWQCB practices. There is no difference between the proposed Policy and RWQCB practices, because no new policy is proposed.
4. Potential environmental effects. There is no change in SWRCB/RWQCB policy, so there are no environmental effects due to the proposed Policy.
5. Potentially significant environmental effects. None.

B. Baseline 2: Effects on potential future conditions under CTR.

Essentially the same as Baseline 1. Adoption of the CTR will not result in any change in the nonpoint source program.

ISSUE 5.3 SITE-SPECIFIC OBJECTIVES

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices regarding site-specific objectives. Development of site-specific objectives is allowed under Federal regulations, and site-specific objectives are subject to U.S. EPA review and approval. Most RWQCB basin plans mention site-specific objectives as available alternatives, but do not provide procedural detail for their development. Those RWQCB basin plans that have details on site-specific objectives reiterate the Federal requirements and guidance on site-specific objectives.
2. Proposed Policy regarding site-specific objectives. The proposed Policy provides a process framework to assist in the development of site-specific objectives.
3. Differences between proposed Policy and RWQCB practices. The development of site-specific objectives is allowed under current practices and the proposed Policy will not change this. The policy promotes statewide consistency and generally describes the procedural steps to be taken to develop site-specific objectives.
4. Potential environmental effects. There is no substantive change to State or Federal requirements for site-specific objectives, so no environmental effects are anticipated as a result of establishing a process framework for their development.
5. Potentially significant environmental effects. None.

B. Baseline 2: Effects on Potential Future Environmental Conditions Under CTR

The CTR will not proposing any additional procedures for site-specific objectives and, therefore, the effects of Baseline 2 are the same as Baseline 1.

ISSUE 5.4 WATERSHED MANAGEMENT AND TMDLs

Baseline 1: Effects on existing environmental conditions.

1. Existing RWQCB practices regarding watershed management and total maximum daily loads (TMDLs). The SWRCB and RWQCBs have developed a Watershed Management Initiative (WMI) that uses a comprehensive, watershed-based approach to address water quality issues. The goals of the WMI are to:

1. Integrate water quality monitoring, assessment, planning, standard setting, permit writing, point source regulatory programs, nonpoint source management, ground water protection, and other programs at the SWRCB and RWQCBs to promote more efficient use of personnel and fiscal resources while ensuring maximum water quality protection benefits;
2. Provide water resource protection, enhancement, and restoration while balancing economic and environmental effects by phasing in an integrated watershed management approach;
3. Promote cooperative relationships, and better assist the regulated community and the public. This will require that the WMI approach include coordination with other Federal, State, and local agencies, as well as stakeholder participation in policy development and review; and
4. Reduce the effect of nonpoint source discharges on water quality through voluntary, collaborative decision-making at the local level that is open to all stakeholders.

The TMDL process is set forth in Federal law and regulation (CWA Section 303(d) and 40 CFR Part 130). A TMDL is the amount of a pollutant that may be discharged into a water body and still maintain water quality standards with a consideration of seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. The TMDL process generally consists of five steps:

1. Identification by each state of water quality limited waters that do not now or are not expected to attain state water quality standards after implementation of technology-based limitations, more stringent state effluent limitations required by Federal, State, or local authority, and other pollution control requirements (e.g., best management practices) required by local, State, or Federal authority, and identification of impairment;
2. Establishment of priority rankings for the development of TMDLs;
3. Development of wasteload allocations (WLAs), load allocations (LAs), and TMDLs;

4. Incorporation of the loadings in the RWQCB basin plans; and
5. Submittal of segments identified, priority rankings, and loads established to U.S. EPA for approval.

Each RWQCB identifies the water quality-limited waters within its respective region and establishes priority rankings and targeting of the listed waters. This information is reported to U.S. EPA in the 303(d) list.

2. Proposed Policy regarding watershed management and TMDL. The proposed Policy encourages the use of the watershed management approach by incorporating this approach into SWRCB Policy for the control of toxic substances. It provides general language explaining the relationship of TMDLs and watershed management; however, it makes no changes to TMDL requirements because these are set forth in Federal law and regulation.
3. Differences between proposed Policy and existing RWQCB practices. The proposed Policy does not impose new regulatory requirements. The proposed Policy should encourage RWQCBs to continue to move toward a watershed management approach to addressing water quality problems involving toxic pollutants.
4. Potential environmental effects. There is no substantive change to SWRCB or RWQCB policy for watershed management, and no change to Federal law and regulation regarding TMDLs, so no environmental effects are anticipated.
5. Potentially significant environmental effects. None.

Baseline 2: Effects on Potential Future Environmental Conditions under CTR

RWQCBs and dischargers can continue to utilize the watershed management approach to protect and improve water quality while balancing economic and environmental effects. The CTR does not affect TMDL requirements, therefore, the potential for adverse environmental effects is the same as Baseline 1.

ISSUE 5.5 EXCEPTIONS

Baseline 1: Effects on Existing Environmental Conditions

1. Existing RWQCB practices regarding exceptions. The U.S. EPA water quality standards regulations authorize the states to grant exceptions to their water quality standards. Specifically, the regulations allow the states to include policies in their water quality standards "generally affecting their application and implementation, such as ... variances" (40 CFR 131.13). The purpose of a variance is to provide a mechanism for not changing the underlying standards, while, at the same time, allowing NPDES permits to be issued in

compliance with the Clean Water Act (U.S. EPA 1993). A variance is a type of exception for water quality standards.

Some RWQCB basin plans specifically allow exceptions to certain discharge prohibitions in their plans. RWQCBs currently utilize various and multiple mechanisms, other than exceptions to allow legally mandated pest control and resource management activities to occur.

2. Proposed Policy regarding exceptions. The proposed Policy describes two types of exceptions:

- a. Categorical exceptions for categories of discharges, such as legally-mandated resource and pest management activities, and
- b. Case-by-case exceptions specific to individual permitted dischargers.

Under the proposed Policy, the RWQCBs may, after compliance with CEQA, allow short-term or seasonal exceptions from meeting a priority pollutant criterion/objective and the statewide toxicity objective of the proposed Policy, if determined to be necessary to implement statutorily-required control measures for resource or pest management (i.e., vector or weed control, pest eradication, or fishery management) or the maintenance of drinking water supplies.

The proposed Policy also allows the SWRCB, with concurrence of U.S. EPA, to grant case-by-case exceptions to meeting a priority pollutant criterion/objective, the statewide toxicity objective in the proposed Policy, or any other provision of the proposed Policy. The SWRCB may grant such a case-by-case exception where site-specific conditions in individual water bodies or watersheds differ sufficiently from statewide conditions, and those differences cannot be addressed through other provisions of the proposed Policy.

3. Differences between proposed Policy and RWQCB practices. Regarding categorical exemptions for legally-mandated activities to protect drinking water and other resources, RWQCBs typically allow these activities to go forward, using various mechanisms. The proposed Policy would likewise allow these activities under a consistent, statewide exception. The provisions for case-by-case exceptions are new and apply only to priority pollutant criteria/objectives, the proposed State narrative chronic toxicity objective, and other provisions of the proposed Policy.

4. Potential environmental effects of proposed Policy regarding exceptions. SWRCB adoption of the proposed Policy for categorical exemptions is not expected to result in potential adverse environmental effects. Categorical exemptions are currently being allowed by RWQCBs for statutorily-required resource or pest management activities and various approaches have been used to address specific situations. For example, the Lahontan RWQCB addresses the use of rotenone for fishery management through a memorandum of

understanding with the DFG. The Department of Health Services, Environmental Health Branch has a permit from the U.S. Army Corps of Engineers and CWA Section 401 certification from the SWRCB for mosquito abatement activities in wetlands in the San Francisco Bay, and parts of the North Coast, Central Coast, and Central Valley regions.

Existing practices for these pest and resource management activities (e.g., using rotenone to kill fish that would eventually eliminate other fish species in a lake, mosquito abatement, etc.) clearly impact water quality and species other than those that are targeted for elimination, and these short-term impacts would occur after adoption of the proposed Policy as well. SWRCB adoption of the proposed Policy will not cause additional adverse impacts. In fact, the proposed Policy sets forth provisions to minimize short-term impacts and prevent long-term adverse impacts to water quality and the environment. Prior to undertaking these statutorily-required resource or pest management activities, the discharger must notify potentially affected public and governmental agencies, and provide a detailed description of the proposed action, including the proposed method of completing the action, time schedule, discharge and receiving water quality monitoring plan (before project initiation, during the project, and after project completion, with the appropriate quality assurance and quality control procedures), CEQA review documents, contingency plans, identification of alternate water supply (if needed), residual waste disposal plans, and, upon completion of the project, certification by a qualified biologist that the receiving water beneficial uses have been restored. CEQA requires public disclosure of potentially significant environmental effects, as well as mitigation of significant effects whenever feasible.

The proposed Policy also allows the SWRCB to grant case-by-case exceptions to priority pollutant criteria/objectives, the proposed Policy's chronic toxicity objective, and other provisions of the proposed Policy. The proposed Policy is narrowly written to address only those situations where site-specific conditions in individual water bodies or watersheds differ significantly from statewide conditions and those differences cannot be addressed through other provisions of the proposed Policy. Here again, the proposed Policy provides measures to protect against environmental impacts.

The SWRCB cannot grant a case-by-case exception until there has been full compliance with CEQA. CEQA requires public notice, consultation with public agencies (responsible agencies) that plan to approve or carry out the actions inherent in the exception, State agencies with jurisdiction over natural resources which are held in trust for the people of the State (trustee agencies such as DFG), as well as any other agencies with jurisdiction over resources that would be affected by granting of the exception. In addition, CEQA requires consideration of alternatives and feasible mitigation in cases with potentially significant adverse environmental impacts.

The proposed Policy also requires that the SWRCB hold a public hearing prior to granting an exception. The U.S. EPA must concur with the exception before it can be granted.

5. Potentially significant environmental effects. It is unlikely that there will be potentially significant effects due to the categorical exception provisions of the proposed Policy because this is not a change from existing practices and additional safeguards are established. Case-by-case exceptions can not be granted unless the SWRCB complies with CEQA and considers potential environmental effects at that time.

B. Baseline 2: Effects on Potential Future Environmental Conditions under CTR

While additional priority pollutants may be regulated upon implementation of the CTR, the potential for environmental effects of the proposed Policy for exceptions is the same as it would be under Baseline 1.

CHAPTER 2 REASONABLE MEANS OF COMPLIANCE

The SWRCB conducted an assessment of economic impacts of adoption of the proposed Policy (See Section VIII). In order to estimate costs, it was necessary to determine whether dischargers would have to take additional compliance actions⁴ due to the proposed Policy provisions addressed in the economic analysis. The analysis included in this FED concluded that dischargers would not have to take any additional compliance actions due to SWRCB adoption of the proposed Policy provisions specifically addressed in the analysis over and above compliance actions they would take to implement the CTR without the Policy. These proposed Policy provisions, therefore, are not expected to result in any environmental impacts due to compliance measures by the dischargers.

The economic analysis included in this document focuses on impacts of the proposed Policy provisions on point source dischargers who will be implementing the CTR criteria. Due to time constraints, the economic analysis of several of the proposed Policy issues that may affect discharger implementation of the CTR (intake water credits and reporting levels) will be addressed in a supplement to the FED which will be available in October 1997. In

⁴ Compliance measures could include, for example, construction of treatment facilities. The construction and operation of waste water treatment facilities could potentially result in adverse effects to the environment. Potential effects could include such things as impacts to aesthetics or archaeological resources, wildlife habitat, air emissions, energy consumption, number of vehicle trips, surface water drainage patterns, odors, etc.

In the process of planning and CEQA review, most potential impacts for treatment facilities are mitigated to less than significant levels. In the past five years, the SWRCB Division of Clean Water Programs considered approximately 50 CEQA documents that went to the SWRCB for State Revolving Fund loans for construction of waste water treatment facilities. Potential environmental impacts were less than significant for about 80 percent of these projects. About 20 percent of the projects had at least one environmental impact that could not be mitigated to a less than significant level. For these projects, both the discharger and the SWRCB determined that the benefits of the project outweighed the unmitigable impact, and so the project was approved.

addition, the supplement to the economic analysis will address compliance measures for the SWRCB's toxicity requirements. Once the SWRCB determines whether dischargers will have to take actions to comply with these proposed Policy provisions, it will also provide a discussion of potential environmental impacts of the means of compliance. This, too, will be included in the supplement to the FED.

CHAPTER 3 GROWTH-INDUCING IMPACTS

CEQA defines the expected discussion of growth-inducing impacts and indirect impacts associated with growth in Section 15126(g) of the CEQA Guidelines. That section states:

"...Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plan might, for example, allow for more construction in service areas). Increases in the population may further tax existing community service facilities so consideration must be given to this impact. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

The proposed Policy provides more consistent State implementation provisions for the implementation of toxic pollutant standards. The economic analysis summarized in FED Section VIII concludes that SWRCB adoption of the proposed Policy will not result in either additional costs to dischargers or benefits to the environment; therefore, the proposed Policy is not expected to foster or inhibit economic or human population growth, or the construction of additional housing.

CHAPTER 4 CUMULATIVE AND LONG-TERM IMPACTS

CEQA Guidelines Section 15355 provides the following description of cumulative impacts:

"'Cumulative impacts' refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."

One means of complying with CEQA's requirement to consider cumulative impacts is to provide a list of past, present, and reasonably foreseeable future projects which are related to the proposed action. There are two projects which meet this definition: the CTR, and Phase 2 of development of the ISWP and EBEP.

This FED evaluates the potential effects of each of the proposed Policy provisions when that issue is implemented in conjunction with the CTR (as compared to implementation of the CTR under existing RWQCB practices). This evaluation, which is included in Section VI, Chapter 1, which provides an issue-by-issue analysis of potential environmental impacts of the proposed Policy both under existing physical conditions ("Baseline 1", pre-CTR) and potential effects of the proposed Policy on future physical conditions under the CTR ("Baseline 2", post-CTR). Baseline 2 provides the cumulative effects analysis necessary to determine potential effects of the proposed Policy when it is implemented in conjunction with the CTR.

The other "reasonably foreseeable" related project is Phase 2 of the development of the ISWP/EBEP. As explained in the FED Section I (Introduction), Phase 2 will involve the establishment of State-adopted water quality objectives for the priority pollutants and incorporation of the proposed Policy into a new ISWP and EBEP. When the SWRCB proposes State water quality objectives, it must consider potential impacts of those objectives. However, we do not at this time know what those objectives would be. At that time, the SWRCB will have to conduct a CEQA review and consider potential environmental impacts (both direct and indirect) of adoption of the objectives it proposes.